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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/549,782	04/14/2000	Stefan Eckart	0100.0000730	8961

24228 7590 10/24/2003

MARKISON & RECKAMP, PC
PO BOX 06229
WACKER DR
CHICAGO, IL 60606-0229

EXAMINER	
LEE, TIMOTHY L	

ART UNIT	PAPER NUMBER
2662	5

DATE MAILED: 10/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/549,782	ECKART ET AL.	
	Examiner	Art Unit	
	Timothy Lee	2662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-60 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-60 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Election/Restrictions

The restriction requirement filed by the Examiner on August 11, 2003 has been withdrawn.

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-35 and 43-60 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Regarding claims 1, 33, and 43, all three of these independent claims mention "determining a first lowest bit occurrence." In reading the specification, it is still unclear as to what is meant by the "lower bit occurrence." The third paragraph on page 9 of the specification first mentions bits and number of bits. The first full paragraph and third full paragraph on P. 10 mention "the earliest possible occurrence of a packet," but it does not relate the "occurrence" to a "lowest bit." Also, in line 27 on P. 10, it is unclear as to how a data packet "may occur between packet 507 and 508." It is difficult to understand why the "occur" is being used in this position. Typically, packets can be

formed, transmitted, received, etc., but it is hard to imagine a packet "occurring." The third paragraph on P. 11 finally relates the bits to the verb "occur," but it is still unclear what a "lowest bit" is and how exactly it has an "occurrence." Line 21 of P. 11 only mentions a "last bit" of a payload occurring on some point on the graph, not a "lowest bit." In the fourth paragraph of P. 12, the words "lowest bit occurrence" are seen together, but as mentioned, the previous discussion does not yield a clear enough idea of what is to be meant by this.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-16,19 and 32-48 are rejected under 35 U.S.C. 102(b) as being anticipated by Blanchard (US 5,793,431).

6. Regarding claims 1, 33, 36, and 43, Blanchard discloses a method encoding audio and video signals and in particular to produce segments of audio and video material that ca be joined together on the fly. The production of seamless system streams containing video will be considered first (obtaining a first input data stream). Referring to Fig. 1, it will be seen that the time taken for all the bits from the end of sequence A to be removed is dependent on how many pictures are in the buffer at the time when data delivery for sequence A stops. Accordingly, the buffer occupancy B at time t will vary from clip to clip. The maximum time for delivery is seen in Equation 1 in col. 6. This time is important to the multiplexer because it allows the setting of the SCR time at this point, since this is the point when the first picture should be removed from

the STD buffer. Therefore, the multiplexer is set to fill the STD buffer to at least B bits and set the SCRs so that at this time the first picture is removed (obtaining buffer delay information). See col. 5, line 66-col. 6, line 29. Turning now to time stamps, the multiplexer has control over the SCR which is the time at which a packet is delivered (obtaining first time stamp information for the first input data stream). In order for clips produced by the above method to appear seamless to a decoder, the time stamps must appear to increase linearly, that is to say there must not be sudden step change in the time stamps which the decoder sees. This is achieved by applying a delta value to all the time stamps in the next clip so they have the values that would have appeared if the current clip had been longer. A delta value is the difference between the PTS of the frame after the last frame of the current clip and the PTS of the first frame of the next clip, summarized by equation (2) in col. 10. Because it is unclear from (see 112 rejection from above) the claims what is meant by "lowest bit occurrence," the Examiner will just treat this statement to mean that it and the "highest bit occurrence" are used to find the "first earliest time" and the "first latest time." Thus, the time in Blanchard before the addition of the delta value can be considered the "first earliest time" and the time after the addition of the delta can be considered the "first latest time." See col. 9, line 61-col. 10, line 32.

7. Regarding claim 36 more specifically, Blanchard discloses that the delta value is used so that the time stamps do not continue to drift apart from each other, so they are used in controlling drift. In effect, the earliest and latest times are being adjusted. Also, as explained in more detail later in the rejection, the multiplexer takes in inputs from the two streams so that it minimizes the overall difference between the audio and video clip lengths. See col. 10, lines 47-56.

8. Regarding claims 2 and 44, as mentioned previously, Blanchard discloses that the time stamps must appear like they increase linearly, so this is the purpose of the adding the delta value. See col. 9, line 66-col. 10, line 4.

9. Regarding claims 6, 8, and 9, the term "frame rate" is applied commonly to video. In PAL, is it 25 Hz and 29.97 Hz for NTSC. There are substantially constant frame rates. See col. 10, lines 33-36. The frame size can be constant or variable depending on the standard being used.

10. Regarding claims 3, 5, and 39, Blanchard mentions that time stamps can tend to drift. See col. 10, lines 27-32. When they vary from their substantially constant bit rate, then it is inherent that they partly do so because of drift.

11. Regarding claims 4, 7, and 38, video signals in general can either be substantially constant in bit rate or variable in bit rate. Whether it is variable or constant depends on what the actual video feed looks like. For example, if there are not many scene changes or action on the screen, then data will be substantially constant. However, if the scenes change constantly from complicated to simple, then the rate will be more variable. A more variable view of video is shown in Fig. 10.

12. Regarding claims 10 and 40, the system figures out what the buffer delay is from the input streams characteristics, so implicitly, the buffer delay information exists in the input data stream.

13. Regarding claims 11 and 41, the data stream, as mentioned previously, is a video stream. See col. 5, line 66-col. 6, line 1.

14. Regarding claim 12, as mentioned previously, the delta is a constant value in order to prevent the time stamps from drifting farther apart, so the lowest constraint is increased by a shifting it upward by a constant amount.

15. Regarding claims 13, 34 and 45, Blanchard discloses that the multiplexer juggles multiple input streams. As shown in Fig. 10 and other figures, it must account of the timing differences between the audio and video timing when multiplexing and selecting which individual stream to send at what time. See col. 10, lines 47-56. All of the rules of finding an earliest time and latest time mentioned above also apply to this second stream of data.

16. Regarding claim 14, the term "frame rate" is applied commonly to video. In PAL, is it 25 Hz and 29.97 Hz for NTSC. There are substantially constant frame rates. See col. 10, lines 33-36. The frame size can be constant or variable depending on the standard being used.

17. Regarding claims 15 and 46, as mentioned previously, the multiplexer is configured such as to be able to select individual stream sections (dividing stream input plurality of packets), that is to say not be constrained by complete video or audio files. See col. 10, lines 47-60.

18. Regarding claims 16 and 47, Blanchard enters through an entire discussion in col. 10, line 37-col. 11, line 27 about how to account for differences in delta values between different streams. In concluding, Blanchard is able to multiplex the two data streams together so that all of the data is transmitted within their given time limits. Review also col. 9, line 61-col. 10, line 32 for discussion on assigning latest and earliest times.

19. Regarding claims 19 and 48, Blanchard discloses that the multiplexer has control over the SCR (system clock reference), which can be considered a current initial time. See col. 9, lines 61-64.

20. Regarding claims 32, 35, and 42, Blanchard discloses that the system is designed for MPEG but not limited to this. See col. 3, lines 64-67.

21. Regarding claim 37, as mentioned previously, the delta value, which is the relationship between the earliest and latest time, is found through the buffer delay that will occur when the stream enters the buffer.

Conclusion

22. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Wegrzyn (US 5,729,540), Slattery et al. (US 6,064,676), McGee et al. (US 5,835,493), and Allen (US 5,652,627) disclose systems that talk about adjusting times in scheduling packets for delivery.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy Lee whose telephone number is (703)305-7349. The examiner can normally be reached on M-F, 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (703)305-4744. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4700.

TLL

HASSAN KIZOU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600